



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/617,227	07/11/2003	Minoru Hasegawa	1082.1060	2346

21171 7590 09/19/2005

STAAS & HALSEY LLP  
SUITE 700  
1201 NEW YORK AVENUE, N.W.  
WASHINGTON, DC 20005

EXAMINER

HODGES, MATTHEW P

ART UNIT PAPER NUMBER

2879

DATE MAILED: 09/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/617,227

Applicant(s)

HASEGAWA ET AL.

Examiner

Matt P. Hodges

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 10-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action, or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Amendment*

The Amendment, filed on 6/24/2005, has been entered and acknowledged by the Examiner.

Cancellation of claims 9 has been entered.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 and 10-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. (US 2003/0038599) in view of Uemura et al. (US 6,650,063).

Regarding claims 1-4 and 10, Aoki discloses (see figure 1) a gas discharge panel including a rear substrate (21), barrier ribs (24), a phosphor layer (25), a front substrate (11) formed opposite the rear substrate, electrodes (12 and 13), a dielectric layer (14), and a protection layer (15) of MgO. (Page 2 paragraph 34). Further the dielectric layer is polysiloxane including a side chain of alkyl groups. (Page 2 paragraph 44) (Page 3 paragraphs 55 and 62). Aoki does not appear to disclose the use of a second dielectric layer between the organic dielectric layer and the protection layer, however Uemura, in the same field of endeavor, discloses the use of a thin inorganic dielectric layer made of TiO<sub>2</sub> formed between the protection layer and the first dielectric layer. (Column 3 lines 27-38). This second dielectric layer

Art Unit: 2879

advantageously prevents cracking in the protection layer by more gradually matching the thermal expansion from the outer to inner layers. Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate a second inorganic dielectric layer as taught by Uemura into the gas discharge panel as disclosed by Aoki in order to advantageously prevent cracking in the protection layer.

Regarding claims 11-14 and 19, Aoki in view of Uemura discloses the device as claimed (see rejection of claims 1-4 and 10 above). Further the limitation of that “the organic dielectric layer and the inorganic dielectric layer are formed together as a laminate” is drawn to a process of manufacturing which is incidental to the claimed apparatus. It is well established that a claimed apparatus cannot be distinguished over the prior art by a process limitation. Consequently, absent a showing of an unobvious difference between the claimed product and the prior art, the subject product-by-process claim limitation is not afforded patentable weight (see MPEP 2113).

Regarding claims 5 and 15, the protective layer composed of a bi-layer of  $\text{TiO}_2$  has a bond distance that is smaller than the wavelength of an atom vacuum ultra violet array.

Regarding claims 6 and 16, the dielectric constant of polysiloxane is less than 3 while the dielectric constant of  $\text{TiO}_2$  is greater than 14.

Regarding claims 7 and 17, the organic dielectric layer has a thickness of 15  $\mu\text{m}$  (Page 2 paragraph 41) while the inorganic layer is 1  $\mu\text{m}$  (Column 6 Table 1).

Regarding claims 8 and 18, the protective layer is 1  $\mu\text{m}$  thick. (Page 7 paragraph 138)

***Response to Arguments***

Applicant's arguments filed 6/24/2005 have been fully considered but they are not persuasive.

Regarding applicant's assertion that Aoki in view of Uemura does not teach the use of a dielectric layer between the organic dielectric layer and the protection layer, the examiner respectfully disagrees. The composition and manufacture of the TiO<sub>2</sub> layer defines its properties as a dielectric layer. Further, though identified together with the protection layer by Uemura, this identification does not negate the dielectric function of the layer or the reasons for combining the layer into the primary reference. Absent a showing that either the motivation for combining the references is not proper, that the device as combined is not operable, or that the device as combined is not structurally the same as the applicant's device as claimed, the rejection is not overcome. In this case, that the motivation of the applicant is not discussed by the prior art is not believed relevant to the standing rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period

Art Unit: 2879

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (571) 272-2454. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571) 272-2457. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mph



VIP PATEL  
PRIMARY EXAMINER